

<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER 449122086300
INTERNATIONAL APPLICATION NO. PCT/EP2004/051590		U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/565,674
INTERNATIONAL FILING DATE 23 July 2004		PRIORITY DATE CLAIMED 25 July 2003
TITLE OF INVENTION RAY TRACING IN DISCONTINUOUS MULTIMODE CHANNEL WAVEGUIDES		
APPLICANT(S) FOR DO/EO/US Thomas BIERFHOFF		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
1. <input type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.		
2. <input checked="" type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.		
3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.		
4. <input type="checkbox"/> The US has been elected (Article 31).		
5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ul>		
6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ul>		
7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ul>		
8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).		
9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).		
10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).		
Items 11 to 20 below concern document(s) or information included:		
11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.		
12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.		
13. <input type="checkbox"/> A preliminary amendment.		
14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.		
15. <input type="checkbox"/> A substitute specification.		
16. <input type="checkbox"/> A power of attorney and/or change of address letter.		
17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 – 1.825.		
18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).		
19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).		

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/565,674	INTERNATIONAL APPLICATION NO. PCT/EP2004/051590	ATTORNEY'S DOCKET NUMBER 449122086300		
20. <input checked="" type="checkbox"/> Other items or information: Copy of the May 17, 2006 Notification of Missing Requirements (2 pages), Declaration and Power of Attorney (3 pages), Assignment and Recordation Form Cover Sheet (3 pages), and Return Receipt Postcard				
The following fees have been submitted		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;">CALCULATIONS</th> <th style="width: 40%;">PTO USE ONLY</th> </tr> </table>	CALCULATIONS	PTO USE ONLY
CALCULATIONS	PTO USE ONLY			
21. <input type="checkbox"/> Basic national fee (37 CFR 1.492(a)) ..... \$300		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 0</td> <td style="width: 40%;"></td> </tr> </table>	\$ 0	
\$ 0				
22. <input type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$0 All other situations ..... \$200		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 0</td> <td style="width: 40%;"></td> </tr> </table>	\$ 0	
\$ 0				
23. <input type="checkbox"/> Search fee (37 CFR 1.492(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... \$100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB ..... \$400 All other situations ..... \$500		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 0</td> <td style="width: 40%;"></td> </tr> </table>	\$ 0	
\$ 0				
TOTAL OF 21, 22 and 23 =		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 0.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 0.00	
\$ 0.00				
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.				
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)		
- 100 =	/50 =	x \$250.00		
		\$		
Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 130.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 130.00	
\$ 130.00				
CLAIMS	NUMBER FILED	NUMBER EXTRA		
Total claims	- 20 =	x		
Independent claims	- 3 =	x		
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		+		
TOTAL OF ABOVE CALCULATIONS =		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 130.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 130.00	
\$ 130.00				
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				
SUBTOTAL =		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 130.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 130.00	
\$ 130.00				
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$</td> <td style="width: 40%;"></td> </tr> </table>	\$	
\$				
TOTAL NATIONAL FEE =		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 0.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 0.00	
\$ 0.00				
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 40.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 40.00	
\$ 40.00				
TOTAL FEES ENCLOSED =		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">\$ 170.00</td> <td style="width: 40%;"></td> </tr> </table>	\$ 170.00	
\$ 170.00				
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Amount to be refunded:</td> <td style="width: 40%;">\$</td> </tr> </table>	Amount to be refunded:	\$
Amount to be refunded:	\$			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Amount to be charged</td> <td style="width: 40%;">\$</td> </tr> </table>	Amount to be charged	\$
Amount to be charged	\$			

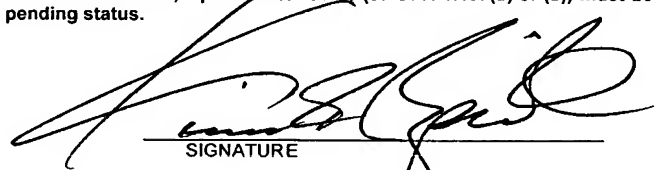
05/02/2006 ATRA 1 00000080 031952 10565674  
 01 FC:1617 130.00 DA

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

- a. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ 170.00 to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit  
Account No. 03-1952. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information  
should not be included on this form. Provide credit card information and authorization on PTO-2038

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be  
filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

  
SIGNATURE

Kevin R. Spivak  
NAME

CUSTOMER NUMBER: 25227

43,148  
REGISTRATION NUMBER



## UNITED STATES PATENT AND TRADEMARK OFFICE

MAY 22 2006

KRS/MRH

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

U.S. APPLICATION NUMBER NO. 10/565,674 ✓	FIRST NAMED APPLICANT Thomas Bierhoff	ATTY. DOCKET NO. 449122086300 ✓
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25227  
MORRISON & FOERSTER LLP  
1650 TYSONS BOULEVARD  
SUITE 300  
MCLEAN, VA 22102

INTERNATIONAL APPLICATION NO. PCT/EP04/51590	
I.A. FILING DATE 07/23/2004	PRIORITY DATE 07/25/2003

CONFIRMATION NO. 5537

371 FORMALITIES LETTER



\*OC000000018805529\*

Date Mailed: 05/17/2006

**NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 01/24/2006
- English Translation of the IA filed on 01/24/2006
- Copy of the International Search Report filed on 01/24/2006
- Preliminary Amendments filed on 01/24/2006
- U.S. Basic National Fees filed on 01/24/2006
- Substitute Specification filed on 01/24/2006
- Priority Documents filed on 01/24/2006
- Specification filed on 01/24/2006
- Claims filed on 01/24/2006
- Abstracts filed on 01/24/2006
- Drawings filed on 01/24/2006

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fees required for this application is \$130 for a Large Entity:

- \$130 Surcharge.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 308-9140 EXT 225

**PART 1 - ATTORNEY/APPLICANT COPY**

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/565,674	PCT/EP04/51590	449122086300